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ABSTRACT

This study investigates students' perceptions of teachers' pupil control behavior, classroom robustness, and student self-control. Results reveal an association between humanistic pupil control behavior of teachers and high levels of classroom robustness, high levels of classroom robustness and high student self-control, and teacher humanism in pupil control behavior and high student self-control. Furthermore, differences in pupil control behavior were found among ethnically homogeneous public high school classrooms, ethnically diverse public high school classrooms, and military high school classrooms. Differences in classroom robustness were also found between ethnically homogeneous public high school classrooms and both ethnically diverse public high school classrooms and military high school classrooms. Seven tables depicting these results are included. (Contains 24 references.) (Author/MKA)

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Running Head: Pupil Control Behavior

Pupil Control Behavior, Classroom Robustness, and Self-Control: Public and Military High Schools Compared

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Pupil Control Behavior, Classroom Robustness, and Self-Control: Public and Military High Schools Compared

Abstract

In this study, students' perceptions of teachers' pupil control behavior, classroom robustness, and student self-control were investigated. The study revealed an association between humanistic pupil control behavior of teachers and high levels of classroom robustness, high levels of classroom robustness and high student self-control, and teacher humanism in pupil control behavior and high student self-control. Furthermore, differences in pupil control behavior were found among ethnically homogeneous public high school classrooms, ethnically diverse public high school classrooms, and military high school classrooms. And differences in classroom robustness were also found between ethnically homogeneous public high school classrooms and both ethnically diverse public high school classrooms and military high school classrooms.

Introduction

Previous work has indicated the saliency of pupil control in the organizational life of schools (Helsel & Willower, 1974; Willower, 1977), the environmental robustness of schools for students (Licata & Willower, 1978; Licata, Willower, & Ellett, 1978), and students' use of self-control methods (Bellack & Schwartz, 1976; Rosenbaum, 1980).

Although none of the past studies of pupil control and robustness bore directly on the question addressed in the current investigation, four of them have an indirect relationship to it. Two studies examined relationships between pupil control and classroom robustness, using samples of teachers and students from public schools (Estep, Willower, & Licata, 1980; Multhauf, Willower, & Licata, 1978). A third study examined the relationship between principals' pupil control behavior and school robustness, using samples of principals and students from public schools (Smedley & Willower, 1981). And a fourth study explored differences between public and private schools concerning pupil control behavior and classroom environmental robustness (Lunenburg, 1991). Moreover, while a high degree of variance among subjects in their ability to apply self-control methods has been reported (Bellack & Schwartz, 1976), little assessment has been conducted regarding school factors which relate to student self-control (Rosenbaum, 1980). To date, no research has explored differences among two types of public high schools and military high schools concerning all three variables: pupil control behavior, classroom robustness, and self-control. The research reported here seeks, on a modest scale, to begin to remedy that situation.

Purpose

The purpose of this study was to investigate the relationships among pupil control behavior, classroom robustness, and self-control. A second objective was to examine differences in pupil control behavior, classroom robustness, and self-control among ethnically homogeneous public high school classrooms, ethnically diverse public high school classrooms, and military high school classrooms. Since no studies have examined

differences between public and military high school classrooms concerning the aforementioned variables, the following null hypotheses were deduced and guided the investigation.

Hypothesis 1: There is no relationship between pupil control behavior and classroom robustness.

Hypothesis 2: There is no relationship between classroom robustness and self-control.

Hypothesis 3: There is no relationship between pupil control behavior and self-control.

Hypothesis 4: There is no difference in pupil control behavior among ethnically homogeneous public high school classrooms, ethnically diverse public high school classrooms, and military high school classrooms.

Hypothesis 5: There is no difference in classroom robustness among ethnically homogeneous public high school classrooms, ethnically diverse public high school classrooms, and military high school classrooms.

Hypothesis 6: There is no difference in self-control among ethnically homogeneous public high school classrooms, ethnically diverse public high school classrooms, and military high school classrooms.

Method

Subjects. The sample was comprised of 196 high school seniors from three southwestern communities, with a nearly equal number of participants from each of the three school settings. The three school sites had enrollments ranging from approximately 2,600 to 3,500 students. Students were randomly selected from regular English classes. Participation in the study was voluntary and nearly all students in each classroom completed usable instruments. A total of 196 PCB, RSD, and SCS instruments were calculated for each classroom, and the classroom (n = 196) was the unit of analysis. Ethnic representation of the sample was as follows: The ethnically homogeneous public high

school had 7.4% African Americans, 14.7% Hispanics, 72.2% Whites, 3.7% Asian/Pacific Islanders, and 1.9% Others. The ethnically diverse public high school had 34.3% African Americans, 21.4% Hispanics, 22.6% Whites, 19.0% Asian/Pacific Islanders, and 2.6% Others. The military high school had 6.1% African Americans, 7.6% Hispanics, 81.0% Whites, 3.2% Asian/Pacific Islanders, and 3.6% Others.

Instruments . To test the hypotheses of the study, operational definitions were required for three variables: pupil control behavior, classroom robustness, and self control. The Pupil Control Behavior Form (PCB), the Robustness Semantic Differential Scale (RSD), and the Self-Control Scale (SCS) were the instruments used.

The PCB is a 20-item, Likert-type device, which measures an educator's pupil control behavior along a humanistic-custodial continuum. Humanistic educators strive to establish an accepting, trustful classroom atmosphere and encourage pupil self-discipline and responsibility. Custodial educators strive to maintain a high degree of order and manifest unilateral, downward communication, distrust of students, and use threats and punitive sanctions to control students. Responses to each item of the PCB range over five choices from always-to-never. The instrument is completed by students, and the score of a given teacher is the mean of the scores of the responding students in that teacher's class. The possible score range is from 20 to 100. Higher scores indicate more custodial pupil control behavior, while lower scores indicate more humanistic behavior. The reported reliability of the PCB was .92 as estimated by Cronbach's alpha (Cronbach, 1951). Item-scale correlations for the instrument averaged .81, and a one-way analysis of variance indicated that the measure differentiated among subjects while clustering within subjects (Helsel & Willower, 1974).

The RSD is based on the semantic differential techniques of Osgood, Suci, and Tennenbaum (1957). It consists of 10 adjective pairs such as interesting/boring, challenging/dull, thrilling/quieting, important/unimportant, meaningful/meaningless, uneventful/action-packed, fresh/stale, powerful/weak, usual/unusual, and passive/active. A

seven-point response scale is used. The form is completed by students, and the classroom score is the mean of the responding students' scores in that classroom. The possible score range is from ten to 70 with higher scores indicating greater robustness. The RSD produced Pearson test-retest correlation coefficients ranging from .40 to .67 and Spearman test-retest correlation coefficients ranging from .42 to .65 (n = 84). Test-retest coefficients for the total instrument were .77 Pearson and .78 Spearman (Licata & Willower, 1978). In addition, analysis of data generated by Estep, Willower, and Licata (1978) with 1,979 secondary students produced an alpha coefficient of .89. Concurrent validity was demonstrated for each of the ten items based on their ability to discriminate significantly between the concepts of "dramatic" and "not dramatic" (Licata & Willower, 1978). Further, the RSD exhibits a degree of face validity as well (Licata, Willower, & Ellett, 1978).

The SCS assesses individual's tendencies to apply self-control methods to the solution of behavioral problems. Students complete a 34-item, Likert-type scale which describes cognition and "self-statements" to control emotional and physiological responses, the application of problem solving strategies, the ability to delay immediate gratification, and perceived self-efficacy (Rosenbaum, 1980). Student responses range from "very like me" to "very unlike me." The score range is 34 to 204 with the higher scores representing high self-control. The Pearson test-retest coefficient for the total instrument was .86. Convergent and discriminate validity of the SCS was examined by comparing the scores obtained on the SCS to scores obtained on a number of existing scales, notably Rotter's (1966) Internal-External Locus of Control Scale and Jones' (1968) Irrational Beliefs Test (Rosenbaum, 1980).

Statistical Analysis. Relationships between pupil control behavior and classroom robustness, pupil control behavior and self-control, and classroom robustness and self-control were tested by Pearson product-moment correlation coefficients. Analysis of variance was used to examine differences in pupil control behavior, environmental robustness, and self-control among ethnically homogeneous public high school

classrooms, ethnically diverse public high school classrooms, and military high school classrooms. Significant differences between group means were calculated using the Tukey/Kramer post-hoc analysis procedure. In addition, three stepwise multiple regression analyses were performed separately to determine the most significant predictors of pupil control behavior, classroom robustness, and self control from classroom type and demographic variables.

Results

Teacher humanism in pupil control behavior was directly related to students' perceptions of their classrooms as robust or dramatic for all classrooms ($r = -.41$, $p < .0001$). Furthermore, there was a significant relationship between students' perceptions of a favorable classroom environment and increased levels of student self-control for the overall sample ($r = .32$, $p < .0001$). Moreover, the relationship between teacher humanism in pupil control behavior as perceived by students and increased levels of self-control as reported by students was significant for all classrooms ($r = -.23$, $p = < .001$). It should be noted that the negative correlations reported were a function of the scaling of the PCB, RSD, and SCS, where increasing pupil control behavior was associated with decreasing classroom robustness and self-control and vice-versa. The Pearson correlations among the variables are summarized in **Table 1**.

Insert Table 1 about here

With respect to differences in pupil control behavior among homogeneous public high school classrooms, ethnically diverse public high school classrooms, and military high school classrooms, the one-way ANOVA yielded a significant difference among the groups ($F = 59.54$, $p < .0001$). The Tukey/Kramer post-hoc analysis indicated a significant difference between student responses in ethnically homogeneous public high school classrooms and all other classrooms. Mean response scores are: ethnically

homogeneous public high school classrooms ($\underline{M}$ = 41.04), ethnically diverse public high school classrooms ($\underline{M}$ = 47.10), and military high school classrooms ($\underline{M}$ = 68.26). That is, students in the public high school classrooms perceived their teachers' pupil control behavior as more humanistic than the teachers' pupil control behavior in the military high school classrooms.

Regarding differences in classroom robustness among ethnically homogeneous public high school classrooms, ethnically diverse public high school classrooms, and military high school classrooms, the one-way ANOVA yielded a significant difference among the groups ($F = 6.09 < .01$). The Tukey/Kramer post hoc analysis indicated a significant difference between student responses in ethnically homogeneous high school classrooms ($\underline{M}$ = 49.59) and both ethnically diverse public high school classrooms ($\underline{M}$ = 43.74) and military high school classrooms ($\underline{M}$ = 42.24). Recall the higher the RSD score, the more robust the classroom environment. Findings suggest from the previous analysis and the present one that students' perceptions of the teachers' pupil control behavior in both public high school classrooms were weighted toward the humanistic end of the continuum, with the control behavior in the ethnically homogeneous public high school classrooms slightly more humanistic than in the ethnically diverse public high school classrooms. Furthermore, these same humanistically oriented classrooms in the ethnically homogeneous public high school were perceived to be more robust or dramatic - that is, more interesting, challenging, meaningful, action-packed, etc. - than those classrooms in both the ethnically diverse public high school and the military high school. However, no statistically significant differences were found in student self-control among the three high schools ($F = 5.73$, $p > .05$). The data are summarized in **Tables 2, 3,** and **4.**

Insert Tables 2, 3, and 4 about here

In addition, three stepwise multiple regression analyses were performed separately with pupil control behavior, environmental robustness, and self-control, respectively as the criterion variable. Standard use of stepwise regression was employed. That is, the first predictor variable added was the one that correlated highest with the criterion; the next variable added was the one that, in concert with the first, best predicted the criterion, and so on. The final regression equation contained the variables that in combination represented the best predictive value while holding the other variables constant.

Ten predictor variables were regressed separately against pupil control behavior, classroom robustness, and self-control from the other two pupil perception scores when not included as a criterion variable, as well as from demographic characteristics such as age, gender, ethnicity, years enrolled, attendance (mandatory or voluntary), satisfaction with school, involvement in school activities, and classroom type. Gender and attendance, dichotomous variables, were entered even though their inclusion technically violated the convention of multiple regression that data be interval type.

Tables 5 through 7 present summaries of multiple correlations (R), squared multiple correlations (R^2), F values (F), and significance levels (p) for each step of the regressions of the ten predictor variables against pupil control behavior, classroom robustness, and self-control analyzed separately.

Table 5 summarizes the results of the regression of pupil control behavior and the ten predictor variables for all classrooms. The predictor variable entering the equation at the first step was classroom type (ethnically homogeneous public high school classroom, ethnically diverse pupil high school classroom, military high school classroom). The PCB/classroom type correlation was .458 ($p < .0001$), indicating about 21% of common PCB-predictor variable variance. At step 2, the next variable to enter the regression equation was classroom robustness, which when combined with the school type variable, increased the multiple correlation to .637 and the amount of predictor/pupil control behavior shared variance to approximately 41%. The addition of satisfaction with the school at step 3

and years enrolled in the school at step 4 raised the multiple correlation to .683, and the amount of PCB-predictor factor variance to approximately 47%. The inclusion of all ten predictor variables in the regression analysis increased the multiple correlation to .712, and the amount of explained PCB-predictor variable variance to 51%.

Insert Table 5 about here

Table 6 presents a summary of findings from the regression of classroom robustness and the ten predictor variables. The first predictor variable to enter the regression equation was pupil control behavior. The PCB-classroom robustness correlation was moderate ($R = .408$ ($p < .0001$) and accounted for approximately 17% of classroom robustness for all classrooms. The next predictor variable to enter at step 2 was classroom type. When combined with the pupil control behavior variable at step 1, the multiple correlation increased to .502, indicating about 25% shared classroom robustness-predictor factor variance. The addition of student self-control at step 3 increased the multiple correlation to .547, and the amount of classroom robustness-predictor factor variance to about 30%. Moderate amounts of classroom robustness variance were accounted for through step 10 by the addition of the remaining predictor variables, increasing the multiple correlation to .56, and the amount of common classroom robustness-predictor factor variance to about 31%.

Insert Table 6 about here

Table 7 summarizes the results of the regression of self-control and the ten predictor variables for all classrooms. The predictor variable entering the regression equation at the first step was classroom robustness. The self-control/classroom robustness correlation was .317 ($p < .0001$), indicating about 10% of common self-control/predictor

variable variance. The addition of satisfaction with school to the equation at step 2 raised the multiple correlation to .379, and the amount of student self-control/predictor factor variance to approximately 14%. The inclusion of all ten predictor variables in the regression analysis increased the multiple correlation to .423, and the amount of explained self-control-predictor variable variance to approximately 18%.

Insert Table 7 about here

The results shown in Tables 5 through 7 suggest that pupil control behavior in all classrooms is largely explained by classroom type in combination with classroom robustness and satisfaction with the school. Classroom environmental robustness is explained by pupil control behavior in combination with classroom type and self-control. And student self-control is largely explained by classroom robustness in combination with satisfaction with school. Clearly, the three major variables of the study (pupil control behavior, classroom robustness, and student self-control) are interrelated, and classroom type and satisfaction with the school are solid predictors of each.

Discussion

Findings indicate an association between pupil control behavior and classroom environmental robustness. When teachers' pupil control behavior was more humanistic toward students, the students tended to report their classroom environments as more interesting, challenging, meaningful, action-packed, etc.; when teachers' pupil control behavior was more custodial, students tended to report their classrooms as more boring, dull, meaningless, uneventful, etc. Few persons have greater potential to influence directly the type and quality of education young people receive than the classroom teacher.

The research supported three previous investigations using public school subjects. One study used elementary public school teachers and students (Multhauf, Willower, &

Licata, 1978); a second used secondary public school subjects (Estep, Willower, & Licata, 1980); a third study used public school principals and students (Smedley & Willower, 1981). And a fourth examined differences between public and private schools using secondary teachers and students (Lunenburg, 1991). The results of the present investigation, combined with the four previous studies, justifies confidence in the relationship. All five studies found pronounced correlations, indicating that pupil control behavior is a solid predictor of classroom environmental robustness.

Students perceived the military high school classrooms ($\underline{M}$ =68.26) as significantly more custodial in pupil control behavior, despite the homogeneity of the sample, than either the ethnically homogeneous public high school classrooms ($\underline{M}$ = 41.04) or the ethnically diverse public high school classrooms ($\underline{M}$ = 47.10). Recall that the higher the PCB score, the more custodial the pupil control behavior of the teacher as perceived by students. This infers that the military high school teachers in this sample were perceived as spending a great deal of time controlling, directing, and disciplining students. Briefly, custodial teachers stress the maintenance of order, unilateral/downward communication, distrust of students, and use threats and punitive sanctions to control students. The public school teachers in this sample perceive themselves as stressing cooperative interaction and experiences in learning, high supportive behavior, less close supervision, close personal relationships between teachers and students, and positive attitudes toward pupils. Briefly, humanistic teachers emphasize the psychological and sociological bases of learning and behavior and an accepting, trustful classroom atmosphere, and confidence in students' ability to be self-disciplining and responsible.

The significant differences found among classroom types (ethnically homogeneous

public high school classrooms, ethnically diverse public high school classrooms, and military high school classrooms) concerning pupil control behavior implies some aspect within these school types, which may predict the school's overall approach to pupil control. Classroom type was found to be the most significant predictor of pupil control behavior accounting for 21% of the variance in the multiple regression analysis; thus, it may be inferred that particular types of classrooms operate within a pre-determined ideology for pupil control. Future investigations might address at what level control orientation is determined (district or school), or whether control ideology varies by teacher or by differing classrooms for the same teacher. Lunenburg (1984a) and Lunenburg and O'Reilly (1974) found that teachers' pupil control ideology was more humanistic in open climate schools than in closed climate schools and that open-minded teachers were more humanistic in pupil control ideology than closed-minded teachers.

The custodial approach to classroom control utilized by military high schools is an accepted method for addressing problem behaviors in the classroom; but findings in the present study indicate that excessive control has a rebound effect, diminishing classroom robustness and student self-control. The military high school had the highest PCB score ($\underline{M}$ = 68.26) and the lowest RSD score ($\underline{M}$ = 42.24) and the lowest SCS score ($\underline{M}$ = 129.86) of the three classroom groups sampled. Recall that the higher the RSD and SCS scores, the more robust or dramatic the classroom environment and the more self-control students apply to the solution of behavioral problems. And the higher the PCB score, the more custodial the pupil control behavior of teachers. That is, students with lower self-control may find it difficult to conform to the stringent control guidelines prevalent in military high schools and subsequently perceive the teacher as custodial and the classroom environment

as less robust. Moreover, the most significant predictors of student self-control in the present investigation were classroom environmental robustness and satisfaction with school, which together accounted for about 14% of the variance in the multiple regression analysis. Further research in this area to address the relationship between self-control and pupil control behavior for at-risk students is needed in order to determine if pupil control behavior is a predictor of self-control for these students, or vice-versa.

Significant differences found among the classrooms concerning environmental robustness (ethnically homogeneous public high school classrooms, $\underline{M} = 49.59$; ethnically diverse public high school classrooms, $\underline{M} = 43.74$; and military high school classrooms, $\underline{M} = 42.24$) may be explained by the significant correlation between pupil control behavior and classroom robustness ($r = -.41$, $p < .0001$). Furthermore, the fact that pupil control behavior accounted for 17% of the variance in robustness for all classrooms, 25% when coupled with classroom type, and 30% when self-control was added indicates that the pupil control behavior of teachers has an impact on classroom robustness. This suggests that students in the public high schools perceived their classrooms as more robust or dramatic - more interesting, challenging, meaningful, action-packed, etc. than their counterparts in the military high school, who perceived their classrooms as less robust - more boring, dull, meaningless, uneventful, etc.

The implications from this and previous studies suggest that, in every instance, custodial pupil control beliefs and behavior were found to be associated with negative effects on classrooms and schools (Lunenburg, 1984b). In this regard, the present study tends to reveal a need for schools and classrooms which are less custodial and more humanistic. Nevertheless, a heavy emphasis on custodial (coercive) pupil control in many

schools continues to exist (Glasser, 1992). Furthermore, new teachers with a relatively humanistic pupil control orientation quickly become significantly more custodial in their orientation and behavior as they become socialized by their more experienced and more custodial colleagues (Hoy, 1967, 1968, 1969; Hoy & Rees, 1977; Hoy & Woolfolk, 1990; Lunenburg, 1986).

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Variables	r	Prob.
Pupil Control Behavior x Classroom Robustness	-.413	.0001
Classroom Robustness x Self-Control	-.322	.0001
Pupil Control Behavior x Self-Control	-.234	.001

Table 1. Pearson Correlation Coefficients Among Variables

	Classroom Types		
	Ethnically Homogeneous Public HS	Ethnically Diverse Public HS	Military High School
Number	65	66	65
Mean	41.04	47.10	68.26
Standard Deviation	13.05	14.45	14.66

Source	df	SS	MS	F
Between Groups	2	23823.73	11911.87	59.54*
Within Groups	193	39610.29	200.05	

*p < .0001

Table 2. Summary Data and Analysis of Variance Data for Comparisons of Pupil Control Behavior Among Classroom Types

	Classroom Types		
	Ethnically Homogeneous Public HS	Ethnically Diverse Public HS	Military High School
Number	65	66	65
Mean	49.59	43.74	42.24
Standard Deviation	11.06	13.81	12.04

Source	df	SS	MS	F
Between Groups	2	1855.03	927.51	6.09*
Within Groups	193	29385.40	152.26	

*p < .01

Table 3. Summary Data and Analysis of Variance Data for Comparisons of Environmental Robustness Among Classroom Types

	Classroom Types		
	Ethnically Homogeneous Public HS	Ethnically Diverse Public HS	Military High School
Number	65	66	65
Mean	131.72	133.35	129.86
Standard Deviation	21.17	17.70	19.05

Source	df	SS	MS	F
Between Groups	2	417.83	209.92	5.73 (N.S.)
Within Groups	193	70418.72	364.86	

Table 4. Summary Data and Analysis of Variance Data for Comparisons of Self-Control Among Classroom Types

Variable	R	R^2	F	P
Classrm. Type	.4580	.2098	65.81	.0001
Robustness	.6368	.4055	51.48	.0001
Satisfaction	.6623	.4386	50.00	.001
Yrs. Enrolled	.6826	.4659	41.66	.01
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n = 196				

Table 5. Stepwise Multiple Regression Analysis of Predictors of Pupil Control Behavior for All Classrooms

Variable	R	R^2	F	P
PCB	.4079	.1664	38.73	.0001
Classrm. Type	.5017	.2517	32.46	.001
Self-Control	.5469	.2991	27.30	.01
n = 196				

Table 6. Stepwise Multiple Regression Analysis of Predictors of Classroom Robustness for All Classrooms

Variable	R	R^2	F	P
Robustness	.3167	.1003	21.62	.001
Satisfaction	.3791	.1437	16.19	.01
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n = 196				

Table 7. Stepwise Multiple Regression Analysis of Predictors of Self-Control for All Classrooms